

ABSTRACT OF THE DISCLOSURE

System and methods are disclosed for employing one or more radiators having non-unique phase centers mounted to a body with respect to a plurality of transmitters to determine location characteristics of the body such as the position and/or attitude of the body. The one or more radiators may consist of a single, continuous element or of two or more discrete radiation elements whose received signals are combined. In a preferred embodiment, the location characteristics are determined using carrier phase measurements whereby phase center information may be determined or estimated. A distributed antenna having a wide angle view may be mounted to a moveable body in accord with the present invention. The distributed antenna may be utilized for maintaining signal contact with multiple spaced apart transmitters, such as a GPS constellation, as the body rotates without the need for RF switches to thereby provide continuous attitude and position determination of the body.